

IN THE CLAIMS

1. (currently canceled) A clostridial neurotoxin substrate comprising any peptide or protein that can serve as a substrate for the proteolytic activity of any clostridial neurotoxin, said protein or peptide having been modified to contain a signal moiety on one side of the cleavage site, and a moiety on the other side of the cleavage site that quenches the magnitude of that signal such that when the substrate is cleaved, an increase in signal is produced.

2 (withdrawn) The substrate according to claim 1 wherein said clostridial neurotoxin is botulinum neurotoxin serotype A. (currently canceled)

3 (withdrawn). The substrate according to claim 2 wherein said substrate is a peptide identified in SEQ ID NO:1 or SEQ ID NO:2.

4. (currently canceled) The substrate according to claim 1 wherein said clostridial neurotoxin is botulinum neurotoxin serotype B or tetanus toxin.

5. (currently amended) A botulinum neurotoxin serotype B or tetanus toxin [The] substrate [according to claim 4] containing a signal moiety on one side of the cleavage site that produces a signal and a moiety that quenches the magnitude of said signal on the other side of the cleavage site such that when the substrate is cleaved, an increase in signal is produced and wherein said substrate is a peptide identified in SEQ ID NO:3 or SEQ ID NO:4.

6 -12 (withdrawn).

13. (withdrawn - currently amended) [The] A method for detecting the presence of botulinum neurotoxin B or tetanus toxin proteolytic activity in a sample, said method comprising:

mixing the sample with one or both [according to claim 12 wherein said] peptide substrates [is a peptide] identified in SEQ ID NO:3 or SEQ ID NO:4, and

detecting an increase in signal produced from proteolytic cleavage of said substrate.

14-15 (withdrawn)

16. (currently amended) A kit for determining the concentration of [a clostridial] botulinum neurotoxin serotype B or tetanus toxin in a sample, the kit containing in close confinement,

(i) one or [more] both peptide substrates according to claim [1] 5 cleavable by said [clostridial] botulinum neurotoxin or said tetanus toxin; and

(ii) said [clostridial] botulinum neurotoxin or said tetanus toxin standard.

17. (withdrawn)

18. (currently canceled) The kit according to claim 16 wherein said clostridial neurotoxin is botulinum neurotoxin serotype B or tetanus toxin and the peptide substrate is one or both of the peptides identified in SEQ ID NO:3 and SEQ ID NO:4.

19 (withdrawn)

20. (currently canceled) A botulinum neurotoxin substrate comprising any peptide or protein that can serve as a substrate for the proteolytic activity of any clostridial neurotoxin, said protein or peptide having been modified so that it can be attached on one side of the proteolytic cleavage site to a solid material.

21. withdrawn

22. withdrawn

23. (currently amended) [The] A botulinum neurotoxin serotype B or a tetanus toxin substrate [according to claim 20] comprising a peptide or protein which may be immobilized to a solid material and which contains a moiety that produces a measurable signal such that when the substrate is cleaved, the signal is released, and wherein said substrate is a peptide identified in SEQ ID NO:9.

24. (currently canceled) The substrate of claim 23 wherein said substrate is identified in SEQ ID NO:9.

25 - 33 (withdrawn).

34. (withdrawn - currently amended) [The] A method for measuring concentration of botulinum neurotoxin B or tetanus toxin in a sample, comprising

mixing the sample with a peptide substrate [according to claim 33 wherein said peptide substrate is a peptide] identified in SEQ ID NO:9,

measuring an increase in signal with time produced from proteolytic cleavage of said substrate and,

determining an increase the concentration of said neurotoxin by correlation to a standard.

35-38 (withdrawn)

39. (currently amended) A kit for determining the concentration of [a clostridial] botulinum neurotoxin serotype B or tetanus toxin in a sample, the kit containing in close confinement,

(i) [one or more] the peptide [substrates] substrate according to claim [20] 23 cleavable by said [clostridial] botulinum neurotoxin or said tetanus toxin; and

(ii) said [clostridial] botulinum neurotoxin or said tetanus toxin standard.

40. withdrawn

41. (currently canceled) The kit according to claim 39 wherein said clostridial neurotoxin is botulinum neurotoxin serotype B or tetanus toxin and the peptide substrate is a peptide identified in SEQ ID NO:9.

42 - 45

46. (withdrawn - currently amended) [The] A method for identifying inhibitors or enhancers of proteolytic activity of [according to claim 44 wherein said neurotoxin is] botulinum neurotoxin B or tetanus [toxin] neurotoxin comprising:

preincubating the neurotoxin with a test compound to make a neurotoxin-compound solution

exposing said solution to [and the substrate is] a peptide identified in SEQ ID NO:9,

measuring signal resulting from the proteolysis of said substrate by said neurotoxin, and

comparing said signal with controls,

In re Application of Schmidt and Stafford - Serial No. 10/802,574

wherein an increase in signal indicates a compound which enhances neurotoxin activity and a decrease in signal indicates a compound which inhibits neurotoxin activity.

47 - 54 (withdrawn).